Compact Universal 1- and 2- Channel LED Controllers

(Part Number: SLC-MA01-U, SLC-MA02-U)

FEATURES

- Computer controlled
- Universal - suitable for any LED
- Dual control modes: DC or Strobe
- Compact
- User friendly application software with GUI
- Capable of driving variable loads
- Full-featured SDK
- Up to 1,000mA output current
- High precision with 1mA current resolution

APPLICATIONS

- Machine vision
- Displays
- Microscopy
- Semiconductor equipment
- Testing instruments
- Medical instruments
- Lighting

PRODUCT DESCRIPTION

Mightex's Compact 1- and 2- Channel Computer-Controlled Universal LED Drivers are designed to drive a broad range of LED light sources. Each unit comes with a powerful PC-based software with a user-friendly GUI, which enables users to drive LEDs without the need to write any code. In addition, a full-featured SDK is provided, in order for users to write their own software and to integrate Mightex's LED drivers into their own systems. Furthermore, the drivers have a built-in protection feature, allowing users to limit LED driving current and voltage.

Each channel can be individually configured to work under one of the following two modes:

Normal Mode (or DC Mode): The output current is a constant, which can be adjusted (using software) from 0 mA to 1,000 mA, through the USB interface; and

Strobe Mode: A Pulse-Width-Modulated (or PWM) periodic strobe pattern is output from the channel, which can be turned on by a software trigger. The strobe pattern may last indefinitely or for a preset number of cycles. The frequency of the PWM strobe can be up to 500Hz. In addition, each channel can be individually DISABLED and ENABLED. No voltage or current is output from a DISABLED channel.

ELECTRICAL SPECIFICATION

Parameters	SLC-MA01-U	SLC-MA02-U	Unit
Number of Channels	1	2	
Power Supply Input Voltage (V_{dc})	9 ~ 24		V
Maximum Output Voltage (V_{max})[1]	V_{dc} - 3		V
Maximum Per Channel Output Current (I_{max})	1,000		mA
Maximum Per Channel Output Power (P_{max})[2]	10		W
Output Current Resolution	1		mW
Output Current Accuracy	±5 mA or ±1.0% whichever is larger		mA
Output Current Repeatability	±2 mA or ±0.5% whichever is larger		mA
PWM Timing Resolution [3]	100		µs
PWM Timing Minimum Step Size [3]	1,000		µs
Interface	USB (-U) or RS232 (-S)		

1. Maximum Output Voltage is 3V less than the Power Supply Input Voltage. For instance, with a Power Supply Input Voltage of V_{dc} = 24V, the Maximum Output Voltage V_{max} would be (V_{dc} - 3V) = 21V;
2. If the channel output voltage is V_d and the output current is I_d, they must simultaneously satisfy: (1) $V_d <= V_{max}$; (2) $I_d <= I_{max}$; and (3) $V_d * I_d <= P_{max}$; and
3. Each period of a PWM square wave comprises of ON time and OFF time, i.e. two (2) 'steps'. The minimum value for each step is 1,000µs, and the minimum increment is 100µs.

CHANNEL I/O PIN DEFINITION

Each Channel has two pins, defined as following:

Label	LED+	LED-
Description	LED Anode	LED Cathode

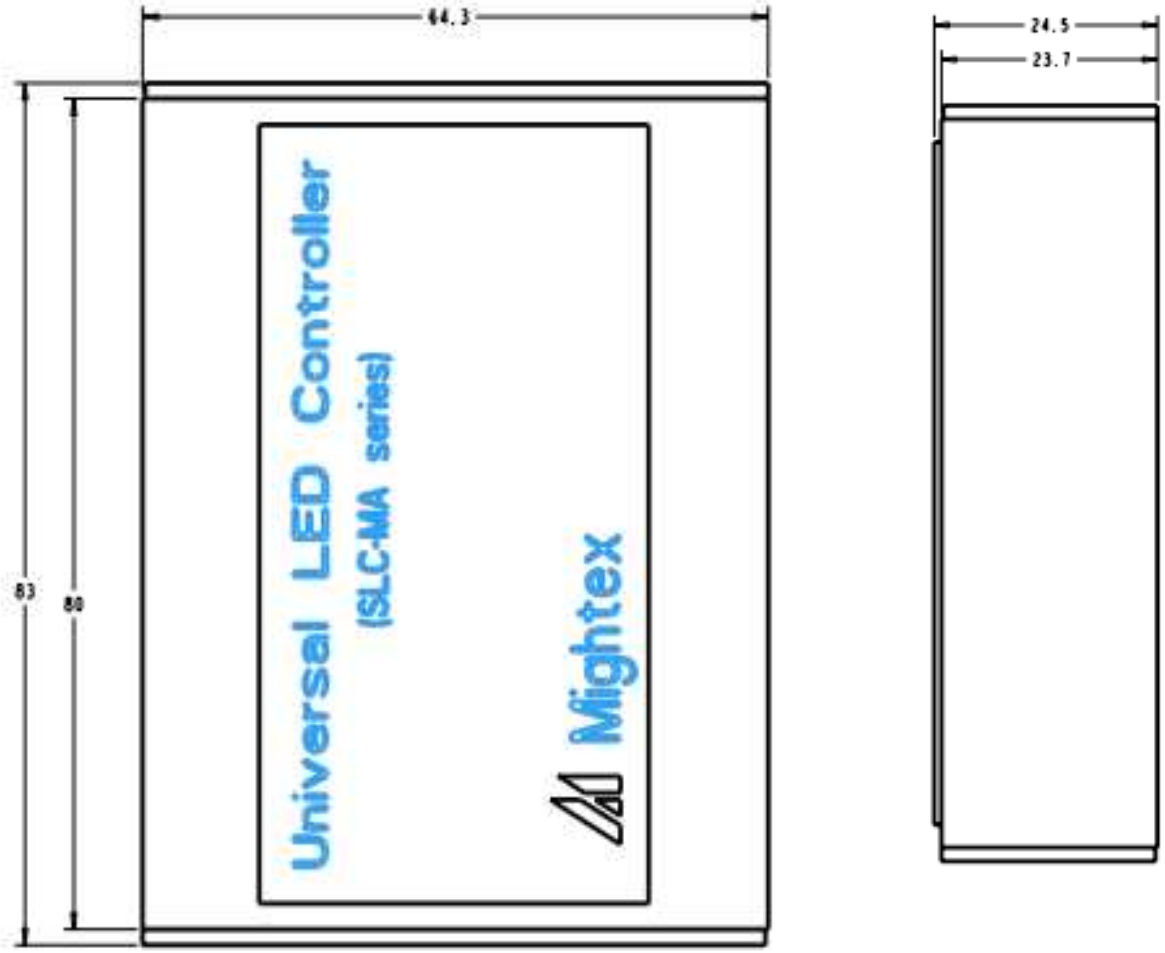
OPERATION CONDITION

Operating Temperature Range	0°C ~ 45°C
Storage Temperature Range	-25°C ~ 85°C
Relative Humidity, Non-condensing	5% ~ 95%

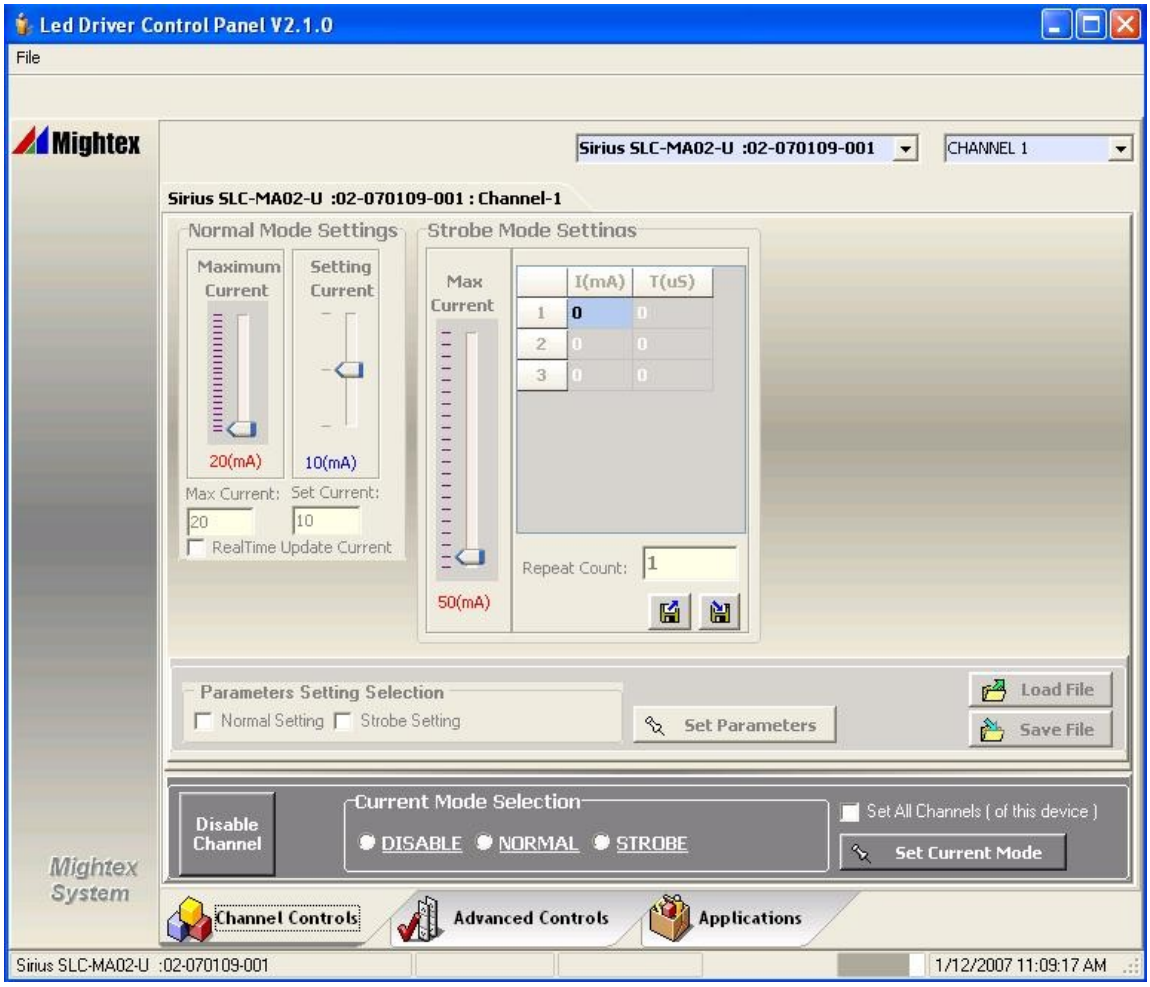
DIMENSION AND WEIGHT

Dimension	80mm(L) x 64.3mm (W) x 23.7mm (H)
Weight	60g

INSTALLATION DRAWINGS



EXAMPLE OF GRAPHICAL USER INTERFACE



Singapore Main Office
Telephone: +65 6996 0391
Email: info@simtrum.com

China Main Office
Telephone: +86 15000853620
Email: sales@simtrum.cn

SIMTRUM
www.simtrum.com